

ON-THE-JOB TRAINING PROGRAM MANUAL

2002 ~ 2004

State of Maine
Department of Transportation
Office of Human Resources
State House Station #16
Augusta, ME 04333-0016
Telephone: (207) 624-3066
Fax: (207) 624-3051
TDD: (207) 287-3392

Revised: March 2002
(Replaces all previous editions)

TO:	Holders	MDOT OJT Manual
FROM:	Penny Plourde, Coordinator, Civil Rights	MDOT/HR
DATE:	March 2002	
SUBJECT:	Revised OJT Manual	

On the following pages you will find the revised On-the-Job Training manual for your use. The manual replaces all other versions and users are required to utilize this document effective March 30, 2001.

Since 1998 MDOT has been documenting training activity, and as a result, I am pleased to share some highlights:

- Contractors having a top down commitment to the OJT program in general, seem to take equal opportunity more seriously.
- EEO Officers supported by top management find managing the company's OJT program easier, and are more likely to carry out their duties in full support from the Company's owner(s).
- Trainees who know and are routinely visited by the Company EEO Officer are better informed of company policies and procedures.
- Contractors are using the OJT program to enhance and promote career trade opportunities for women and minorities.
- Trainees indicate they like working outdoors in the road and bridge industry, learning new things and find these jobs pay a living wage.

We have made efforts to improve the program by:

- Improving the forms used in the OJT program and including detailed instructions for completing the forms.
- Providing an OJT Monthly Reporting form for Contractors needing to document their OJT candidate recruiting efforts.
- Increasing on-going monitoring of Trainees and Contractors during the training period to enhance the successful completion of Trainee and Contractor obligation.

In advance, we acknowledge your cooperation and efforts to fully integrate women and minorities into your workforces.

Highlights of the On-the-Job Training Program

- Elimination of Construction Clerk as no evidence this is an underutilized trade for women or minority employment.
- Clearer guidelines for submission/reporting process.
- Trainee wages:
 - Bridge/Highway laborers at Davis Bacon level.
 - Skilled Crafts a minimum of 75% of Davis Bacon, or minimum wage whichever is greater while on MDOT project.

- Training classifications more defined. Trainees better advised that training is not guaranteed in all machinery aspects of the classification.
- Off-site training opportunities. Contractor may move trainee off-site with crew and may adjust pay rate accordingly.
- Training commitment may be moved from project-to-project. Credit for hours worked apply to original commitment.
- **Contractor's meeting/exceeding employment goals may apply for an OJT waiver.**
- MDOT's OJT Program is applicable in all modal programs - FHWA, FTA, FRA & FAA.
- Contractors can submit new training outlines for use, provided training classifications are in skilled trades where an under-utilization of women and minorities is demonstrated. Prior to preconstruction conference, submit written outline directly to OJT consultant. If accepted, written notice will allow training to begin on current project.

Policy questions:

**Maine Department of Transportation
Office of Human Resources
#16 State House Station
Augusta, Maine 04333-0016
Telephone: 207-624-3066 Fax: 207-624-3051**

FREQUENTLY USED NUMBERS

“THE BRIDGE” (for job announcements).....	772-7767
MDOT Office of Human Resources.....	624-3066
Maine Human Rights Commission	624-6050
N.A.A.C.P.....	776-7340
Women Unlimited.....	800-281-5259 or 623-7576
Women, Work & Community	800-442-2092

TABLE OF CONTENTS

SPECIAL PROVISION 660.....	page 5-7
-----------------------------------	-----------------

ON-THE-JOB TRAINING REQUIREMENTS.....	page 8-9
OFF-SITE TRAINING.....	page 10
TRAINEE ORIENTATION	page 10
LETTER OF INTENT	page 11
REGISTRATION FORM	page 13
WEEKLY OJT EVALUATION FORM.....	page 15
CONTRACTOR’S OJT MONTHLY REPORTING FORM	page 17

TRAINING CLASSIFICATIONS

ASPHALT MACHINE OPERATOR/RAKER.....	page 20
CONSTRUCTION WORKER HIGHWAY	page 21
TRUCK DRIVER.....	page 22
STEEL AND REINFORCING ROD WORKER.....	page 23
WELDER COMBINATION	page 24
PIPELAYER.....	page 25
PLANT OPERATOR.....	page 26
OPERATING ENGINEER	page 27
MECHANICAL MAINTENANCE WORKER	page 28
EQUIPMENT OPERATOR	page 29
CARPENTER	page 30
CONSTRUCTION EQUIPMENT MECHANIC.....	page 31
BRIDGE CONSTRUCTOR.....	page 32
ELECTRICAL WORKER.....	page 33
FOREPERSON.....	page 34
IRONWORKER	page 35
STEEL PAINTER	page 36
QUALITY CONTROL TECHNICIAN	page 37
SAFETY SPECIALIST	page 38

SPECIAL PROVISION SECTION 660 ON-THE-JOB TRAINING

Description: As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

Training and upgrading of minorities and women toward journeyworker status is the primary objective.

Contractors, where seasonal workforce for the preceding year did not meet craft tradesperson goals of 6.9 % for women and .05% for minorities in Skilled and Semi-skilled areas, and a Laborer level of 10% for women and .05% for minorities shall: **(a)** provide on-the-job training (OJT) aimed at developing full journeyworkers in the types of trades or job classifications involved on a Contract; and (b) when a Contractor has complied with this above cited Women and Minority employment goals, no further training is required provided the numbers remain at or above the given percentages. The method for determining company-wide compliance shall be the actual hours worked by women and minorities during the preceding season from April 1 through November 15 annually. Such record shall be provided to the Department's Office of Human Resources at time of award. Contractors in compliance with craft goals shall no longer be required to provide training provided the workforce does not fall below the required levels. If it does, Contractors shall begin training in accordance with OJT Special Provision 660.

Total training hours under this Special Provision will be _____.

If OJT is required than the Contractor shall complete and forward to the Maine Department of Transportation's Office of Human Resources, the Letter of Intent, along with the OJT Registration form including the Workforce Breakdown form, prior to commencing any project work. The Contractor shall submit the Registration/Enrollment form to the Maine Department of Transportation's Office of Human Resources, indicating each classification to be used in the course of meeting this requirement.

Training classifications shall be distributed among work classifications needed by a Contractor in Skilled and Semi-skilled craft levels.

The Contractor shall receive credit only when MDOT or its designated representative has approved the program. Contractors will be reimbursed for such hours as are approved.

The Contractor shall make every effort to enroll minority and women trainees (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The Contractor shall be responsible for documenting the steps taken in pursuance thereof, prior to determination as to whether

the Contractor is in compliance. If, in accordance with Special Provision 660, the Contractor is acting affirmatively and has achieved the semi-skilled and skilled craft employment goals of 6.9% women and .05% minorities, and 10% for women, and .05%

for minorities in Laborer classes, then the Contractor will have no further training obligation. If the Contractor falls below these standards as is the policy of MDOT, it shall immediately reinstate an Affirmative Action Program as approved by the Maine Department of Transportation's Office of Human Resources.

Trainees shall not be enrolled in a classification in which they have successfully completed a training course leading to journeyworker status, or for which they have held employment as a journeyworker. No contractor shall enroll trainees who possess post secondary degrees, certification or diploma without first securing written approval. Only individuals with non-construction oriented credentials, except those who are upgraded will be considered. Upgrades from Semi-skilled to Skilled crafts is acceptable but must be approved by the Department.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the Department. Nothing in this Section limits a Contractor to utilize only those curriculum found in the OJT Manual. The Department or its designee will approve a training program if it meets the equal employment opportunity obligations of the Contractor. By design, it will lead to qualifying the average trainee for journeyworker status in the classification used. Contractors are encouraged to examine training opportunities which fit their need.

Contractors may lower tier OJT obligations to any subcontractor.

Contractors whose OJT hours are waived, may still establish training obligations for subcontractors. This Special Provision, Section 660, shall be included in all contracts to subcontractors. Subcontractors are expected to comply with craft goals. As with other Special Provisions applied to a sub, the Contractor retains obligations accordingly.

If training is required, the Contractor shall maintain records, and furnish the Department or its designee with documentation of each trainee progress using the Weekly OJT Evaluation form.

The method of measurement for the OJT item will be by the number of hours worked according to the approved training program. At enrollment, trainees shall be paid at Davis Bacon rate for unskilled positions (highway laborer and bridge labor). In skilled trades trainees shall be paid at least a minimum of 75% of the prevailing wage paid for craftspersons in the classification on the project. Without exception OJT wage rates are to be applied on all MDOT Federal-aid projects. Provided a trainee achieves the objectives of the program, the trainee shall be expected to receive incremental wage increases as they progress in their program. By completion, a trainee shall be expected to earn a

comparable wage to that of other journeyed workers, employed by the contractor in this classification. If a trainee performs functions that are generally considered to be in a different job classification they will be paid at that classification.

The basis of payment for the OJT shall be at the contract unit price per hour. Payment will be made even though the Contractor received additional training program funds from other sources, provided such other source does not specifically prohibit the Contractor from receiving other payment. No payment shall be made to the Contractor, if the Department determines the Contractor failed to provide the required training, or if able, the contractor did not hire the trainee as a tradesworker when their program is completed. The Department, through its designee shall work with any contractor whose efforts have been deemed not consistent with the spirit or intent of the Program.

The Contractor shall begin training at the onset of employment for the trade classification. Trainees are expected to remain in status as long as training opportunities exist in the work classification, or until the training program is completed. Provided the Contractor has the Department's approval training may be conducted off-site but without reimbursement. Verification of training hours shall be determined for credit on off-site work by both: 1) the weekly training report, and 2) the Contractors usual daily/weekly time card. The Contractor will have fulfilled the responsibilities by specifically providing the maximum total training opportunity as required in this Special Provision.

If the Department determines the Contractor has not complied with this Provision, the number of hours remaining to be completed for each training hour required, as determined by the Office of Human Resources, will be multiplied by the prevailing wage rate plus fringes for that particular trainee's classification. The resulting figure shall be deducted from any monies due the Contractor. The Office of Human Resources shall move within ten days of the ruling to advise the Contractor, in writing, so a corrective action plan may be developed. If efforts fail, sanctions may be imposed. Contractors may be entitled to mediate the penalty by requesting so in writing to the Department's Office of Human Resources. If mediation is warranted it shall be for extenuating circumstances beyond the control of the Contractor.

1. The Contractor whose project has a number of OJT hours assigned shall establish this affirmative action program in a way likely to successfully achieve the objective of a more balanced workforce, especially as to yield women and minorities.

2. On-the-Job Training is a meaningful way by which Contractors can comply with Executive Order 11246. It is MDOT's intention that a Contractor's overall workforce reflects the diverse population of this State. Every effort shall be made by Contractors to comply. MDOT through the Office of Human Resources shall afford Contractors every reasonable effort to be successful.

3. When a contract is awarded that contains the Training Special Provision, the Contractor shall furnish to the Office of Human Resources for approval the number of trainees to be trained in each selected classification and the training outline to be used by completing the Letter of Intent. Furthermore, the Contractor shall specify the starting time and wage rates for training in each of the classifications.

4. If a Contractor has achieved the craft levels of 6.9% for female and .05% minority participation in Semi-skilled and Skilled craft levels, and 10% at Laborer or entry level rate, then it may submit OJT waiver request to the Office of Human Resources, The Workforce Utilization Information form shall be submitted immediately after award of the project.

5. In selecting a trainee, follow the following priority for enrollment: Select a woman, minority or disabled person who is capable of completing or comes closest to completing the program; and select a craft routinely required on the specific project and one in which women and/or minorities are underutilized.

RECRUITMENT

Until such time that representative numbers of minorities and women complete training and their utilization as journeyworkers is demonstrated to the extent of the participation goals set forth in the Department's contracts, training required under the Training Special Provision is primarily limited to women and minorities.

ENTRANCE REQUIREMENTS:

*Minimum of eighteen (18) years of age;

- *Applicants shall evidence a reasonable ability to handle the technical requirements of the job;
- *Applicant shall not be enrolled in any classification for which they have successfully completed a course leading to journeyworker status, or for which having been gainfully employed.
- *Applicants shall not be enrolled who has previously been in MDOT's OJT program unless in a position which upgrades them from semiskilled to skilled craft status.

SUPERVISION

The trainee shall be assigned to a journeyworker, supervisor, or other knowledgeable employee who shall on a daily and personal basis direct, review, and observe the trainee in work processes.

WORK HOURS

A trainee is expected to work the work week of the Contractor, including overtime.

WEEKLY TRAINEE REVIEW

Contractors shall submit a completed Weekly Training and OJT Evaluation form for each trainee to the Office of Human Resources in order to evaluate trainee performance. Trainees shall be reviewed by their immediate supervisors. It is the Contractors responsibility to disseminate the form accordingly as stated on the form.

CERTIFICATE OF COMPLETION

At or near conclusion of training, each trainee shall be entitled to a certificate of completion issued by the Office of Human Resources.

TERMINATION FOR CAUSE

A trainee may be terminated at any time during the training for cause. The Contractor shall make a reasonable effort to notify the Office of Human Resources of termination. Ideally before such action is exercised, a conference with the trainee, supervisor, Project Engineer, Contractor EEO Officer and a representative from the Office of Human Resources, should meet and review why the action is necessary.

OFF-SITE TRAINING

Nothing in this program prohibits a Contractor from providing off-site training on other Federal, State or private sector work, provided the work is meaningful and result oriented. When a Contractor intends to transfer trainees to other sites without an OJT requirement, the hours trained will be credited to the project on which the trainee has been approved. Off-site training requests must be submitted in writing to the Office of Human Resources, or its designee, prior to the intended transfer date. Failure to follow this requirement may result in no credit for time. If a trainee is transferred off-site, the Weekly OJT Evaluation form, or other preagreed documentable verification is still required for all off-site training.

Trainee wages may be adjusted according to the prescribed wages set for off-site project. It is the responsibility of the Contractor to notify the trainee of any off-site wage adjustment.

ORIENTATION

At the onset of training, the employer shall provide all OJT trainees with an orientation prior to commencing training. At a minimum, the orientation will include the following:

- a. Seasonality of construction work;
- b. Adverse weather conditions under which work may occur;
- c. Trainee may be required to work extra hours;
- d. Qualities the company considers desirable in its workers;
- e. How promotions in the company occur;
- f. How to dress; steel toe boots, foul weather gear, etc.;
- g. Safety, including OSHA and Company program (s);
- h. Training is an opportunity, not a privilege;
- i. Who the trainee reports to and who will conduct instruction ;
- j. Trainees may have to perform tasks outside of the OJT program;
- k. Contractor EEO, Complaint and Sexual Harassment policies and who the EEO Officer is;
- l. Work ethics such as honesty and punctuality;
- m. Trainee encouraged to recruit other group members for employment consideration;
- n. Disciplinary procedures, termination and lay off policies;
- o. Whom trainee is to notify if absent, or needs to leave the worksite. Be specific, identify what the contractor's policies are (if possible, advance written notice, telephone, etc.);
- p. Method and frequency of wages paid for both on and off-site training; and
- q. Excessive or patterned absenteeism shall not be tolerated.

Office of Human Resources
16 State House Station
Augusta, ME 04333-0016
Tel (207) 624-3066 Fax (207) 624-3051

OJT LETTER OF INTENT

Total Training Hours: _____

Contractor Name _____ anticipates training in the classifications listed and expect to start each on the below given dates (must reflect total training hours assigned to project):

1. _____ Date: _____

2. _____ Date: _____

3. _____ Date: _____

Report of employment statistics for the entire Company workforce, by hours worked for each craft between April 1 and November 15 for the last calendar year.

Position	Total Employees	White Males	Females	Hispanic	American Indian	Black	Asian	Disabled	Number of Recalls
Superintendent									
Operating Engineer									
Equipment Operator									
Mechanics									
Truck Drivers									
Ironworker/Rod									
Carpenters									
Const.Wkr. Bridge									
Const.Wkr.Hwy.									
Pipelayer									
Bridge Maint. Wkr.									
Laborer, Semi-Skill									
Laborer, Unskilled									
Foreperson/Bridge									
Foreperson/Hwy									
Welder									
Other, _____									
Other, _____									

Approved by

DEO/ER Official: _____ Date: _____
(cc: MDOT on-site Project Representative, File, WU)

Project Name & Location: state project's name and its location.

Total Training Hours: indicate total hours assigned to the project.

Contractor Name: insert contractor name and insert name of each training classification, include date each OJT program will start.

General instructions for inserting position, gender and race data: for each classification employed by the contractor, indicate total employees, total white males, females, Hispanics, American Indians, Blacks, Asians, Disabled and number recalled.

OJT REGISTRATION/ENROLLMENT FORM
Complete in FULL and include job application/resume

Name: _____,

Address: _____, _____ Me. _____

Phone No: _____ Social Security No: _____

Ethnic/Protected Class: _____ Sex: ____ Male ____ Female

Training Classification: _____ Hours: _____

____ New Hire ____ Upgrade ____ Other, what _____

Enclosed copy of: ____ Resume or ____ Job Application.

Start Date: ____/____/____ Start Wage: \$_____/hr.(____% journeyed rate)

Expected

End Date: ____/____/____ End Wage: \$_____/hr.(____% journeyed rate)

Site Phone No: _____ EEO Officer: _____

* No contractor will be given credit until this form is approved by DEO/ER.

Notice: Per Contract Special Provision, should the DEO/ER determine the Contractor has not complied with the approved training program, the number of remaining hours for each trainee will be multiplied by the prevailing wage rate for that particular classification. The resulting figure shall be deducted from the Contractor's final payment.

_____/____/____ _____/____/____
Trainee Signature Date Employer Signature Date

FOR MDOT USE ONLY:

Approved By:

MDOT Official: _____ Date: _____

(cc: MDOT on-site representative Contractor, Trainee, File)

Project Name and Location: insert project name and location of project.

Contractor: insert Contractor name enrolling trainee.

Name: insert name of person to be enrolled.

Address: insert proper mailing address of enrollee.

Phone Number: insert telephone or message number for enrollee (no pager #).

Social Security Number: insert enrollee's Social Security Number.

Ethnic/Protected class: indicate race or ethnicity of enrollee.

Sex: check male or female.

Training Classification: indicate classification name.

Hours: indicate total classification training hours.

New Hire, Upgrade, Other: indicate which category.

Enclosed Copy of: Check whichever is accurate.

State Date: indicate date training commences.

Start Wage: indicate starting wage to % of journeyed wage rate.

Expected End Date: indicate date training completed.

End Wage: indicate ending wage to % of journeyed wage rate.

Site Phone Number: indicate Contractor's on-site telephone number.

EEO Officer: indicate name of company's EEO Officer.

Trainee Signature: trainee signs and dates form.

Employer Signature: Contractor representative signs and dates form.

MDOT USE only: for signature and date by Compliance USA.

INSTRUCTIONS FOR COMPLETING WEEKLY OJT REPORT

Week Ending: payroll date.

Trainee Name: name of OJT person.

Project Number: project number OJT is registered with.

Location: where the project is located.

Classification: name of classification OJT program trainee is enrolled in.

Wage: hourly rate paid to trainee.

Effective Date: date rate of pay is effective.

State Use Only: construction manager to insert correct hours.

Phase of Training: use guide on training curriculum outline.

Safety/Productivity/Quality/Understanding/Attitude/Attendance: indicate how trainee evaluated in each phase. N=needs improvement A=acceptable E=excellent.

Required hours: total number of hours required in each phase.

Hours accumulated as of last week: total hours accumulated and recorded on previous weeks' form.

Total Hours This Week on-site: record total hours worked on-site this week.

Total Hours This Week off-site: record total hours worked off-site this week.

Total Hours Accumulated to date: record total hours from on and off-site.

Total Hours: add total from each column.

Promotion/Discipline/Dismissal/Quit/Laid Off: check off and explain.

Completed by: signed by Contractor representative.

MDOT representative: signed by Construction manager.

Date: fill in appropriate date.

Job Function: employer writes brief explanation of trainees' work done for week report is completed.

Contractor's OJT Monthly Reporting Form

Contractor Name _____ Project Name & Location _____ Date _____

OJT Obligation _____ Number of Active OJTs _____ Expected Completion Date of the Project _____

1. Recruitment Contacts Made This Month:

Date	Organization and Name of Person Contacted	Method of Contact	Results	Follow-up Planned

2. OJTs hired this month:

OJT Name	Start Date	Training Program	Hours

3. OJTs let go this month:

OJT Name	Date of last day worked	Total # of hours completed	Reason for leaving

4. What recruitment activities do you plant to do this month: _____

Use and attach additional sheets as required.

Submitted by: _____ **Date:** _____

Please FAX to 207-624-3051 or send by mail to: Maine Dept. of Transportation, Office of Human Resources, Attn: Christy Cross, #16 State House Station, Augusta, ME 04333-0016

INSTRUCTIONS FOR COMPLETING CONTRACTOR'S OJT MONTHLY REPORTING FORM

Contractor Name: insert name of company.

Project Name and Location: insert name and location of project.

Date: insert report date.

OJT Obligation: indicate total number of training hours assigned.

Number of Active OJTs: indicate total number of trainees enrolled at report time.

Expected Completion Date of Project: date project work is anticipated to be completed.

Date: indicate date of contacts.

Organization and Name of Person Contacted: indicate contacts.

Method of Contact: indicate how contact was made (i.e., visit, telephone, fax, other).

Results: indicate action resulting from contact.

Follow-up Planned: indicate next step.

OJTs hired during month: indicate trainee name, start date, program enrolled into, and total number of hours required.

OJTs let go this month: indicate trainee name, last date worked, total hours completed, and reason for leaving (i.e., termination, lay-off).

Recruitment Activities: indicate activities planned for month (i.e., visit technical college, NTO Conference, etc.).

Submitted by: signed and dated by Contractor representative.

ASPHALT MACHINE OPERATOR/RAKER

Operates equipment, hand tools to spread and apply levels of hot mix bituminous on subgrade of highway, driveways, and streets.

Bolts extensions, lights burners, and guides dump truck into dumping position. Learns the operation of the screed to eliminate voids at curbs and joints. Turns handwheel, punches depth gauge to periodically verify depth. Rakes asphalt evenly.

1. Familiarization of Equipment/Tools	50
a. Safety	
b. Fueling, lubrication, and servicing	
2. Operation of Equipment	450
a. As primary operator/conductor	
b. Distribution of material	
c. Adjustment of screed, spreader, mix	
 TOTAL HOURS:	 500

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

CONSTRUCTION WORKER HIGHWAY

Acts within work crew at construction sites; learns company policies, jobs and to gain knowledge of all phases of highway construction. Becomes familiar with all types of heavy equipment; reads and understands blueprints, topographical maps and surveying. Performs related duties.

1. Familiarization with Equipment 30
 - a. Safety
 - b. Types of equipment and materials
 - c. Maintenance
 - d. Fueling, lubrication, and servicing
2. Job Knowledge 970
 - a. Safety
 - b. Blueprints and topographical map reading
 - c. Use of transit
 - d. Planning and layout of field office and grounds
 - e. Layout, staking, and site clearing
 - f. Ground condition analysis and testing
 - g. Excavation, drainage, pipelaying, and sealing
 - h. Subgrading, final grading, and erosion control
 - i. Placement of concrete, asphalt, and granite
 - j. Job site cleaning
 - k. Traffic control, sign erection, and maintenance
 - l. Compaction, backfill, multiplates, and culverts
 - m. Strip and salvage

TOTAL HOURS: 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

TRUCK DRIVER

Operates heavy duty on or off highway earth and rock moving equipment; such as, but not limited to Koehring Dumpster, Euclid, either back or bottom dump, International Payhauler, etc.. May oil, grease, service and make normal operating adjustments to equipment. Perform related duties.

1. Orientation and Observation

- a. Safety procedures 20
- b. Instruction in operating of vehicle 20

2. Care and Maintenance

- a. Safety procedures 30
- b. Routine fueling, lubrication and servicing 30

3. Actual Operating of Equipment 900

TOTAL:..... 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

STEEL AND REINFORCING ROD WORKER

Performs a combination of duties to raise, place girders, column and position and secure steel bars in concrete forms to reinforce concrete; determines number, sizes, shapes, and locations of reinforcing rods from blueprints, sketches, or oral instructions. Selects and places rods in forms, spacing and fastening them together, using wires and pliers. Cuts bars to required lengths, using hacksaw, bar cutters, or acetylene torch. May bend steel rods with handtools or rod bending machines. May reinforce concrete with wire mesh. Fastens steel members to cable of hoist, guides cable, forces members into place. Verifies vertical and horizontal alignments, bolts and aligns to permanently fasten.

1. Familiarization with Equipment 20

- a. Safety
- b. Fabricating steel
- c. Setting, welding, cutting and tiering steel
- d. Tools of trades
- e. Scaffolding

2. Participation as a Reinforcing Rod Worker 580

- a. Safe operating procedures
- b. Fabrication of reinforcement assembly
- c. Rod fastening, cutting, welding and placement
- d. Picking steel, rigging, splicing cable
- e. Fastening steel
- f. Raising of fabricated steel, steel girders, plates, trusses and columns

TOTAL HOURS: 600

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

WELDER COMBINATION

Welds metal parts together, according to layouts, blueprints, or work order, using both gas welding or brazing and any combination of arc welding processes. Performs related tasks, such as flame cutting and grinding. May repair broken or cracked parts, fill holes, and increase size of metal parts. May position and clamp together components of fabricated metal products preparatory to welding.

1. Maintenance and Equipment Operations..... 100

- a. Safety
- b. Observation of equipment in use
- c. Types of welds

2. Welding Operations..... 500

- a. Review of special safety procedures
- b. Layout, cut, fit, and weld all types of materials
- c. Fabricate and repair equipment
- d. Conduct field welding (emergency repair of heavy equipment)

MINIMUM TOTAL HOURS:..... 600

* Trainee may spend up to an additional 400 hours of eligible training in preparing for and taking the State of Maine certification program. Successfully securing a welding certificate will constitute journey status and will automatically terminate the trainee status..... 400

MAXIMUM TOTAL HOURS: 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

PIPELAYER

Lays glazed or unglazed clay, concrete, plastic, or cast-iron pipe for storm or sanitation sewers, drains, or water mains, performing any combination of the following tasks: Grades and smooths bottom of trench or culvert to specified elevation, using shovel. Guides hoist, or crane. Inserts spigot end of pipe into bell end of previously laid section. Adjusts pipe to line and grade, and secures pipe into position. Forces oakum or yarn into space around bell, using caulking tool and hammer.

1. Familiarization with Equipment and Machines 100

- a. Safety
- b. Types of pipe
- c. Spade operation and laying of pipe
- d. Ditch preparation
- e. Shoring ditches

2. Participation in Operations 400

- a. Safe operating procedures
- b. Ditch grading with compressed air driven or hand operated spade
- c. Rigging and lowering of pipe
- d. Laying pipe and duct
- e. Adjust pipe to proper elevation and angle
- f. Insertion of spigot end of pipe into bell end of last pipe laid

TOTAL HOURS: 500

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

PLANT OPERATOR

May be designated, according to type of plant operated as, Asphalt-Plant Operator, Sand and Gravel-Plant Operator or Crusher Operator. Accordingly not all items in the outline may be obtained.

Operates asphalt or sand and gravel plant, crush or segregate materials used in construction; moves controls on panel board or control board to heat, dry and mix ingredients such as asphalt, sand, stone and naphtha to produce asphalt paving materials; controls feeding, crushing, and sifting machine in sand and gravel plant. Observes gauges, dials, and operation of machinery to insure conformance to processing specification. Repairs machinery using handtools, power-tools and welding equipment.

1. Care and Maintenance of Equipment..... 150

- a. Safety
- b. Plant set up and tear down
- c. Fueling, lubricating and servicing
- d. Feeding material into machine
- e. Hand signals
- f. Truck and truck load count

2. Operation of Equipment..... 650

- a. Safe operating procedures
- b. Maintenance of equipment
- c. Operation of equipment
- d. Introduction to welding

TOTAL HOURS: 800

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

OPERATING ENGINEER

Operates several types of power construction equipment, such as hoists, derricks, cranes, shovels, tractors, scrapers, or motor graders, to excavate and grade earth, erect structural and reinforcing steel, and place concrete. Adjusts handwheels and presses pedals to drive machines and control attachments, such as buckets, and swing booms. May clean, oil, and grease equipment.

1. Familiarization 100

- a. Safety
- b. Fueling and lubrication
- c. Starting vehicles
- d. Manipulating valves, levers, and gears
- e. Maintenance requirements
- f. Types of equipment
- g. Capabilities and limitations

2. Operation of Equipment..... 900

- a. Safe operating procedures
- b. Excavation for footings and removal of soil
- c. Loading and unloading of material
- d. Trenching
- e. Hoisting material
- f. Placement of pipe, beams, girders, piling, etc.

TOTAL HOURS: 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

MECHANICAL MAINTENANCE WORKER

Inspects, repairs and maintains functional parts of automotive and mechanical equipment and machinery, such as pumps, compressors, pipelaying machines, ditch diggers, trucks and tractors, using hoists, hand tools, gauges, and factory manuals. Disassembles and over hauls internal combustion engines, pumps, power units, generators, transmissions, clutches and rear ends, using tools and hoists. Grinds and resets valves, using valve grinding machine. Adjusts brakes, aligns wheel and tightens bolts and screws and reassembles equipment. Operates equipment to test its functioning capability. Changes oil, checks batteries, repairs tires and tubes, and lubricates equipment and machinery. Ascertains that operational equipment meets factory and federal specifications and standards.

1. Equipment and Systems Familiarization 100

- a. Safety
- b. Tools of the trade
- c. Automotive and equipment engines
- d. Light equipment engines
- e. Chassis, brake, cooling, electrical, fuel, hydraulic, exhaust systems

2. Preventative Maintenance 150

- a. Safety procedures
- b. Disassembly, cleaning and parts inspection
- c. Replacement of minor parts and adjustment

3. Participation as a Mechanic..... 750

- a. Safe operating procedures
- b. Systems trouble shooting
- c. Disassembly of engines for overhaul and replacement
- d. Disassembly of clutches, transmissions, and drive train components for overhaul or placement
- e. Disassembly of final drive and track assemblies
- f. Systems maintenance and repair

TOTAL HOURS: 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

EQUIPMENT OPERATOR

Operates several types of power construction equipment, such as Bulldozer, Roller, (steel or pneumatic), Front End Loader, Gradall, Backhoe or Combination. Excavates, grades, compacts earth fills, subgrades and bituminous surfaces to specifications. Adjusts handwheels and presses pedals to drive machines and controls attachments; such as blades, buckets. May clean, gas, oil, and grease equipment.

1. Familiarization of Equipment..... 50

- a. Safe operating procedures
- b. Fueling/lubrication/hydraulic systems
- c. Types of equipment, introduction, and safe operation
- d. Materials/earthwork/site preparation

2. Operation of Equipment..... 950

- a. Grading, and finish grading
- b. Roller
- c. Trenching operation/pipelaying
- d. Backfill/curbing
- e. Manipulating controls, and fastening blades, hoses, belts, linkage, etc.
- f. Moving, staking materials, clearing and grubbing
- g. Loading/unloading flat bed for moving

(Contractors selecting this category shall be expected to rotate trainees training on the variety of equipment in a Contractor's rolling stock, etc.)

TOTAL HOURS: 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

CARPENTER

Builds rough wooden structures, concrete forms, scaffold, tunnel and sewer supports, and temporary frame shelters, according to sketches or oral instructions. Examines specifications to determine dimensions of structures. Measure boards, timbers, or plywood, using square, measuring tape and ruler and marks cutting lines on materials, using pencil and scribe. Saws boards and plywood panels to required sizes. Nails cleats across boards to construct concrete forms. Braces forms in place with timbers, tie rods, and anchor bolts, form use in building concrete piers, footings, and walls. Erects chutes for placing concrete. Cuts, assembles timbers to build trestles and cofferdams.

1. Familiarization	50
a. Safety	
b. Power and hand tools	
c. Material selection	
d. Basic form design	
2. Carpentry Techniques	900
a. Safe operating procedures	
b. Decking form work	
c. Box culverts, inlets and headwall form work	
d. Pier, pile, and cap form work	
e. Parapet and hand railings	
f. Abutment form work	
g. Retaining wall form work	
3. Stripping and Salvage	50
a. Safe operating procedures	
b. Cleaning material	
c. Grading and stacking	

TOTAL HOURS: 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

CONSTRUCTION EQUIPMENT MECHANIC

Inspects, analyzes malfunctions, rebuilds, repairs, and adjusts heavy construction equipment, such as cranes, power shovels, scrapers, paving machines, and motor graders, rock crushers, trench digging machines, bulldozers, off-highway trucks, and other equipment. Uses power and hand tools, jacks and specialized calibration tools or instruments to obtain factory and federal specifications. May be required to use welding equipment and make field repairs. Is familiar with factory repair and parts manuals.

1. Equipment and Systems Familiarization	100
a. Safety procedures	
b. Tools of the trade	
c. Diesel engines, 2 or 4 cycle	
d. Frames	
e. Brake systems	
f. Cooling systems	
g. Electric systems	
h. Fuel systems	
i. Hydraulic systems	
2. Actual Participation as a Mechanic	900
a. Safety	
b. Preventive maintenance	
c. Systems trouble shooting	
d. Systems maintenance, repair, and replacement	
 TOTAL HOURS:	 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

BRIDGE CONSTRUCTOR

Performs any combination of the following duties on bridge construction projects, usually working in utility capacity, by transferring from one task to another task where demands require workers with varied experience and ability to work without close supervision: Measures distance from grade stakes, drives stakes, stretches tight line, and positions and blocks up under forms. Positions and secures steel and re-bars in concrete forms to reinforce concrete. Assists in placing concrete. Removes forms after concrete has hardened; stacks material according to grade and dimensions after cleaning.

1. Familiarization 50

- a. Safety
- b. Layout
- c. Tools of the trade

2. Job Knowledge 950

- a. Safe operating procedures
- b. Form Building and Erection
- c. Structural concrete
- d. Comprehension of Plans and Specifications
- e. Stripping and Salvage
- f. Structural Steel
- g. Carpentry
- h. Welding

TOTAL HOURS: 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

ELECTRICAL WORKER

Assists in a combination of duties, including; wiring, grounding, cutting wires to scale from blueprints or oral directions, installation of fixtures, switches and devices, installation of controls, conductors, heating, and air conditioning. Performs related tasks such as testing circuits.

Completion of this program does not qualify a person as an electrician.

1. Familiarization	50
a. Safety	
b. Tools of the Trade	
c. Materials	
d. Material selection	
2. Electrical Operations	950
a. Safe operating procedures	
b. Basic wiring	
c. Basic grounding	
d. Installation of controls	
e. Installation of fixtures	
f. Installation of switches	
g. Installation of heat and air conditioners	
h. Control wiring	
i. Cable splicing	
TOTAL HOURS:	1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

FOREPERSON

(This program will only be utilized for applicants who have either gone through the OJT program as some lower level laborer or has had equal experience.)

Acts in supervisory capacities and coordinates activities of work crews at construction sites; learns company policies, jobs and personnel functions to gain knowledge of all phases of highway or bridge construction. Becomes familiar with all types of heavy equipment. Reads and understands blueprints, topographical maps and surveying.

1. Familiarization with Equipment 60
 - a. Safety
 - b. Types of equipment and materials
 - c. Maintenance, operations limitations, and capabilities
 - d. Fueling, lubrication, and servicing
2. Supervisory Responsibilities 640
 - a. Employee relations/Sexual Harassment
Training/Investigatory Techniques
 - b. Public relations
 - c. Safety (OSHA and Medical Self Help/First Aid Techniques)
 - d. Crew/equipment coordination
 - e. Crew/equipment management
3. Job Knowledge 700
 - a. Safe operating procedures
 - b. Blueprint/topographical map reading
 - c. Use of transit or related tools
 - d. Planning and layout of field operations, site, scope of area
 - e. Layout and staking
 - f. Site clearing
 - g. Ground condition analysis and testing
 - h. Excavation
 - i. Drainage
 - j. Pipelaying
 - k. Subgrading
 - l. Fine grading
 - m. Placement of concrete, asphalt, and granite

TOTAL HOURS: 1400

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

IRONWORKER

Performs a combination of duties and procedures related to placement of structural steel. Use of manlifts, cutting torches, portable tools, power tools, material identification, and basic welding processes are integrated into the training.

1. Familiarization and Safety	50
a. Personal Protection	
b. Water Safety	
c. Identification Training (MSDS)	
d. Material Identification	
e. Basic welding processes	
2. Equipment Usage.....	150
a. Manlifts	
b. Cutting torches	
c. Slings	
d. Portable Power tools	
3. Scaffold Set-Up.....	60
a. Scaffold erection	
b. Ladders, rails, toe-boards, etc.	
c. Double Tie Off Policy Education	
4. Placing Steel.....	740
a. Cutting and Burning	
b. Drilling and Tapping	
c. Tensioning Bolts and Cables	
d. Lifting, Moving, Placing, and Aligning Steel	
 TOTAL HOURS:	 1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

STEEL PAINTER

Acts within work crew at construction sites; learns company policies and gains knowledge of all phases of bridge painting. Performs any combination of duties to safely prepare and paint structural steel.

1. Familiarization and Safety	50
a. Safety	
b. Respiratory Protection	
c. Personal Protection	
d. Water Protection	
e. Personal Health Risk Education	
f. Health Risk Evaluations and /or Testing (MSDS)	
g. Identification Training (MSDS)	
h. Disposal of Hazardous Materials	
2. Equipment Usage.....	200
3. Scaffold Set-Up/Containment Set-up	60
4. Stripping	40
5. Paint Application.....	250
a. Preparation and Mixing	
b. Techniques	
c. Clean-up	

TOTAL HOURS: 600

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

QUALITY CONTROL TECHNICIAN

Acts within work crew at construction sites; learns company policies and gains knowledge of all phases of Quality Control. Performs any combination of duties to safely conduct duties. Also may work at lab.

1. General Safety & Materials Testing Orientations	100
a. Familiarization of Plant and Worksite Safety	
b. Familiarization of Bituminous Concrete & Aggregate Prod.	
c. Familiarization of AASHTO & ASTM Test Procedures	
2. Concrete Aggregate Testing	50
a. Familiarization of Basic Concrete Aggregate Properties	
b. Familiarization of AASHTO & ASTM Test Procedures	
c. Testing of Physical Concrete Aggregate Properties	
3. Asphalt Aggregate Testing.....	300
a. Familiarization of Basic Asphalt Aggregate Properties	
b. Familiarization of AASHTO & ASTM Test Procedures	
c. Testing of Physical Bituminous Aggregate Properties	
4. Miscellaneous Bituminous Materials Testing	200
a. Familiarization of Basic Bituminous Concrete Properties	
b. Familiarization of AASHTO & ASTM Test Procedures	
c. Hands on Testing of Mix by Extraction	
d. Hands on Testing of Rice Specific Gravity	
e. Hands on Testing of Marshall Mix Properties	
5. Miscellaneous Aggregate Testing	150
a. Hands on Washington State Degradation Test	
b. Hands on Sand Equivalent Test	
c. Hands on Overview of Proper Stockpiling Methods	
d. Hands on Control of Blending Aggregates for Gradation	
6. Nuclear Density Training & Testing.....	200
a. Certification by Nuclear Gauge Safety Trainer	
b. Hands on Testing of Bituminous Mix Material Densities	
c. Hands on Testing of In Place Gravel Densities	
d. Hands on Calibration of Nuclear Thin Lift Gauge to Cores	
TOTAL HOURS:	1000

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.

SAFETY SPECIALIST

This position is designed to provide the trainee with a hands on introduction to heavy construction and the role of a construction safety person on typical heavy construction projects.

The trainee will perform entry level work in a variety of actual construction occupations on the assigned project(s) he/she will assist project supervisors and safety specialists in planning for safety, environmental protection, and other loss control planning activities. He/she will participate in an increasingly more responsible role in environmental protection activities, safety inspections, injury/incident investigation, injury management and record keeping. Manages and maintains safety equipment, conducts safety meetings and training and provides technical safety, health, and environmental support. This does not qualify the person as an independent safety specialist.

1. Orientation to heavy construction.....	100
a. Safety	
b. Material selection	
c. Tools of the trade	
d. Hands on working assignments	
2. Orientation to safety	200
a. Company policies and procedures	
b. Awards program	
c. Activity planning	
d. Injury management	
e. OSHA and other applicable standards training (minimum, 30 hours official program)	
3. Safety operations	1000
a. Work activity planning	
b. Inspections and investigations	
c. Environmental monitoring and control	
d. Safety equipment management	
e. Hazardous material/waste management	
f. Technical safety support	
g. Ergonomics evaluations and improvement	
h. Injury management	
i. Record keeping	
TOTAL HOURS:	1300

NOTE: This is a general outline of duties a trainee may perform in this job category. The trainee may not receive training in all of the above areas.